

REMARKS

This is in response to the Office Action of September 22, 2005. With this Amendment, claim 18 has been amended and all pending claims 18-24, 27-34 and 36-49 are presented for reconsideration and favorable action.

Claims 18-24, 27-34 and 36-49 were rejected under 35 U.S.C. § 103(a) based upon Rhein (US 5,811,979) in view of Bertness (US 6,316,914). Applicant believes that the invention as set forth in the pending claims is not suggested by either of the two references, nor a combination thereof, and therefore the rejections should be withdrawn.

As discussed in the Remarks section of the Preliminary Amendment of June 30, 2005, the claim as amended (in that Preliminary Amendment) includes "a battery, a load, and a first cable connection connecting a first side of the battery to a first side of the batter to a first side of the load; and a second cable connecting a second side of the battery to a second side of the load", all items located in "a vehicle." Rhein teaches a "grounding jumper cable testing device" (Col. 2, lines 47-48) which is designed to "determine resistance of the individual jumper cables" (Col. 1, lines 45-46). Rhein does not show the claimed connection to the battery and load of an electrical system of a vehicle along with the other elements set forth in the pending claims. There is simply no hint nor suggestion in Rhein's disclosure of using Rhein's jumper cable testing device in a vehicle, or of substituting a vehicle battery as claimed in place of Rhein's DC power supply 26, or of combining Rhein with Bertness.

In the same vein, the secondary reference Bertness provides "a method and/or an apparatus for monitoring or controlling charging of a battery in a vehicle." Bertness states that "In one aspect, a method is provided for charging a battery in a vehicle" Bertness further states that "In another

aspect, an apparatus for monitoring the condition of a storage battery while the storage battery is coupled in parallel to an electrical system of an operating vehicle is provided." Accordingly, it is believed that Bertness does not show, suggest or hint at an apparatus or method "for determining cable resistance of wiring of an electrical system of a vehicle.

Even if one were to combine the references as suggested by the Examiner, the resulting combination does not yield the claimed invention. Specifically, consider that Bertness' battery 18 were substituted for Rhein's DC power supply 26, and the Examiner's comments from the Office Action of September 22, 2005 were followed. The chart below addresses each of the Examiner's comments in the column on the left (except for Examiner's last remark about Bertness), with a sequenced drawing showing how each of the Examiner's additions contributes to his circuit.



<p>Regarding claims 18 and 36, Rhein discloses a method and device for determining cable resistance including coupling a first Kelvin (FIG. 3, see elements V3, 16) connection to a first side of a load (22) and a second connection to a second side (14) of the load,</p>	
<p>Coupling a voltage sensor to the first side of a dc source (26);</p>	
<p>Measuring a first parameter of the electrical system between a first Kelvin connection and a second Kelvin connection (col. 5 lines 26-27)</p>	<p>measure $P_{V_4 - V_3}$, "first parameter"</p>
<p>Measuring a second parameter of the electrical system between the voltage sensor and the second Kelvin connection to the electrical system (col. 5 lines 28-30)</p>	<p>measure $P_{V_1 - V_4}$, "second parameter"</p>
<p>A processor configured to determine cable resistance of wiring of the electrical system between the second Kelvin connection and the first Kelvin connection as a function of the first parameter and the second parameter (col. 5 lines 40-43). Rhein does not disclose a battery.</p>	<p>$R = f(P_{V_4 - V_3}, P_{V_1 - V_4})$</p>

The processor in the Examiner's combination of Rhein and Bertness measures the resistance "between the second Kelvin connection and the first Kelvin connection.", which is the load resistance. Applicant's invention, however, does not measure the load resistance (see Applicant's Fig. 1), which is Applicant's high current load 22, but rather measures R_1 and R_2 , which are the resistances of the cables 24 and 26. The combination of the two references does not even accomplish the same purpose as Applicant's invention.

For the reasons given here, and the reasons set forth in previous responses from Applicant, Applicant believes the unamended claims 27 and 36 are non-obvious over the combination of Rhein and Bertness as set forth by the Examiner. For these reasons, the rejections should be withdrawn. Applicant believes that the other rejected claims which depend from independent claims 18, 27 and 36 are non-obvious.

In view of the above amendments and remarks, it is believed that the present invention is in condition for allowance. Consideration and favorable action are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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